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112174-003.UTL**REMARKS**

Claims 1-17 and 48-78 are pending in the Application and are presented for reconsideration and further examination in view of the following remarks. By the foregoing amendments, Claims 1, 4, 5, 7, 11, 12, 13, 48, 52, 53, 55, 60, 61, 62, 66, 67, 69, 70, 72, and 73-78 have been amended.

Rejections Under § 102(a)

Claims 1-6, 8-17, 48-61, and 63-78 were rejected under 35 U.S.C. § 102(a) as being anticipated by Naghian (WO 00/49824). Applicant reserves the right to present evidence of an earlier invention date than the publication date of Naghian. Applicant also submits that all of the pending claims are patentable over Naghian for the reasons set forth below. Though the following remarks are directed at primarily to the rejected independent claims, they apply with equal force to each of the claims which depend therefrom.

One example of Applicant's claimed invention can be used to provide for call admission in a system where the modulation scheme and/or forward error connection scheme of units can be adaptively changed in response to changing conditions. Each unit can have a planned PHY mode (for example, QAM 16) which can be determined, for example, when the system is initialized. The planned PHY mode can be determined based upon distance and objects such as buildings which are in the transmission path. The planned PHY mode could be changed during operation of the system to a more robust modulation scheme with a lower overall data rate (QAM 4) in view of changing transmission conditions, for example, rain. However, assuming the worst case condition when allowing for the admission of new connections could greatly decrease usage (overall bandwidth) of the system. Therefore, in one embodiment the method takes into account bandwidth commitments based on the planned modulation scheme for each connection and the current actual modes in use when determining whether to accept a new connection.

Naghian describes a call admission system for use in a cellular telephone network. The network described by Naghian does not vary the modulation scheme or forward error connection scheme of the communication links. In the system described by Naghian, "If a bearer request would result in the load being over the first predetermined limit, the admission control entity tries to make room for the bearer request, i.e., release resources without degrading the quality of

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the service (QoS) provided for the existing bearers. The admission control entity may perform this by adjusting power control parameters, handover control parameters or both." (Naghian, page 4, lines 20-24.) Naghian does not use a planned modulation scheme but appears to only use an actual modulation scheme. That is understandable because the modulation scheme in Naghian does not change. Naghian does not describe or suggest a system that uses different modulation techniques or error correction techniques and takes those resulting bandwidth requirements into account in a call admission procedure.

Referring to amended Claim 1, Naghian fails to teach or suggest each of the limitations of the claim. Claim 1 is directed to a method for controlling the admission of connections in a wireless communication system in which the modulation schemes of the uplinks and downlinks can vary over time. One aspect of the claim relates to "summing the hard bandwidth commitments . . . including the new connection . . . based on a planned modulation scheme for each connection." However, in the office action, the portion of Naghian pointed to as corresponding to this claim limitation (prior to the current amendment) determines the current load of the system, "for example by requesting current load information from a load control entity," and then calculates the load as a result of adding the bearer request. (Naghian, page 6, lines 9-13.) Therefore, at least in connection with the existing connections, the current power levels of the current connections are used, not planned power levels. In addition, applicant respectfully submits that the term "planned modulation scheme" as used in the present application does not correspond to power levels.

In addition, Claim 1 includes determining a second hard bandwidth commitment based on the "current modulation scheme" which is different than the planned scheme for at least one connection. Naghian clearly does not teach two different modulation schemes and does not calculate two types of hard bandwidth commitments using two different modulation schemes.

With regard to Independent Claim 48, Naghian fails to teach or suggest each of the limitations of the claim. Claim 48 is directed to a communication system that controls the admission of new connections and the suspension of existing connections between a base station and customer premise equipments (CPEs), wherein the base station and the CPEs are each configured to increase or decrease the robustness of their modulation scheme. Naghian does not describe a system that increases or decreases the robustness of transmission modulation schemes.

For example, Naghian does not describe CPEs with both a current modulation scheme

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and a planned modulation scheme as set forth in Claim 48. The devices in Naghian appear to be able to only vary their power levels, not their modulation scheme. Varying modulation schemes directly effects through put (data rates).

In addition, the call admission control module of Claim 48 determines whether to allow a new connection based on a comparison of a total air link line rate between the first and second CPEs and the base station based on a reference modulation scheme. No such determination is taught or suggested by Naghian. First, Naghian does not discuss or disclose any air link line rate but only discusses power levels ("load"). Second, because the system of Naghian does not vary the modulation scheme of the units, Naghian does not have both an initial modulation and a current modulation scheme. In addition, modulation schemes are not part of Naghian's system for call admission. Naghian instead looks at power level requirements.

Claim 66 is directed to a method and Claim 72 is directed to a system for performing call admission control in a communication system that supports subscriber level adaptive modulation. Because Naghian does not describe a system or method that supports subscriber level adaptive PHY modes, many of the elements of Claims 66 and 72 are not taught or suggested by Naghian.

For example, Naghian does not disclose "determining a reference line rate for the communication system when using a reference modulation scheme" as in Claim 66. Naghian determines an upper limit to the "stable region" which is the region within which the system can handle all traffic. (Naghian, page 5.) However, in Naghian the stable region is determined based upon power limits of the system, not a reference line rate based upon a reference modulation scheme. Different modulation schemes have different levels of through put per connection. Therefore, when a system has the ability to change modulation schemes, it is advantageous to take that into account for call admission. Naghian does not.

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In addition, Naghian does not disclose "determining multiplicative rates for normalizing CPEs selected modulation scheme to the reference modulation scheme" as set forth in Claim 66. The normalization allows for the comparison of the bit rates or air link line rate for connections with different modulation schemes. Because Naghian does not use different and varying modulation schemes, there is no need in the system of Naghian to normalize selected modulation schemes for comparison to a reference line rate and there is no such disclosure in Naghian.

With regard to Claim 72, Naghian does not teach or suggest a system for performing call admission with terminals with current and initial forward error connection (FEC) schemes. The system of Naghian does not describe different and varying FEC schemes. In addition, as was noted above, Naghian does not teach or disclose determining whether to allow a new connection based on a comparison of an air link rate with a total hard bandwidth commitment.

In view of the foregoing, applicant respectfully requests that each of the rejections under § 102 be withdrawn.

Rejections Under § 103(a)

In view of the foregoing remarks regarding the rejections under section 102, applicant submits that each of the rejections under section 103 are overcome and should also be withdrawn.

Conclusion

The Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any

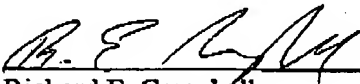
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remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

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Dated: 8/16/05

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